

Bucking the Trends
Have the balls to make up your own mind!
by Ian King

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PUBLISHED 10-19-01 10:00

King, I., 2001, Bucking the trends - Have the balls to make up your own mind, t-mag.com, 19 Oct 2001

Drop the Flock!

"You shouldn't squat because it's bad for your knees!"

"Don't use free weights because they're dangerous!"

"Don't use creatine because your left kidney might squirt out your arsehole! Same goes for eating too much protein!"

Ever get tired of hearing people say that stuff? I sure do. But I let it slide when it comes from pencilnecks who're more suited for a chess match than a workout, or a healthcare professional who learned all he knows about sports training from a one-hour lecture back in college.

But when equally dumb stuff comes from someone who's switched on enough to be reading *T-mag*, I feel obliged to encourage these people to broaden their outlook and to apply some simple, objective analysis. In other words, I encourage them to have the balls to make up their own minds!

I gave a seminar recently in Sydney, Australia, and some of the strength and conditioning coaches in attendance told of their frustrations with gym owners who discourage them from doing power cleans because the lift was "dangerous." Some even told of gyms that totally frowned on the use of free weights for the same reason. The seminar attendees were smart enough to conclude that the gym owners were off track, but obviously the prevailing attitude regarding power exercises and free weights is going to impact the lay population of gym goers.

The one that really stunned me was the seminar I gave in LA! Get this — the majority of the participants were shocked when I suggested the appropriate range for a bench press was from full extension all the way down to the chest! I think they wanted to string me up then and there! Most of these participants were gym instructors and personal trainers, and after I picked my jaw up off the ground, I learned about the influence that they'd been exposed to — a subculture of thought in the US that no one should ever bench beyond halfway down because of the "danger" to the shoulders!

I don't expect too many *T-mag* readers to be so intellectually challenged that they accept the "interesting" theories such as the "never bench below halfway in range," but there does seem

to be some gullibility or blind acceptance in certain areas. I say this based on some of the letters I receive.

I'm not going to tell you what conclusions you should come to, but I'm going to encourage you to give *thought* to trends or beliefs before endorsing them. Realize that you can make up your own mind; that you don't have to follow the crowd like a bird in a flock. And I mean that literally. Check out this excerpt from a letter I received:

"Scientists studying flocks of birds with high-speed film made a remarkable discovery. They found that birds react faster to subtle movements of the flock than they do to signals from their own brains. As the flock veers to avoid a predator, each bird takes about 1/70 of a second to mirror a neighboring bird's change of direction. This is less than the reaction time of an individual bird." (15)

Now I'm sure there're great survival benefits to birds from behaving like this; however, I doubt that conforming to trends is beneficial to *T-mag* readers. Still, I suspect that many may inadvertently find themselves reacting like a bird in a flock. I don't like to see you miss out on great training methods, exercises, or training tools simply because you acted upon or adopted the dominant thoughts of the time.

Can you imagine a time when the dominant beliefs were: deeps squats should never be done; athletes need no more protein than the average person (who only needs 0.7 gms/kg of bodyweight); and anabolic steroids don't work? Well, those times existed, as this brief history lesson below will show. If you adopted the "flock mentality" during the 60's and 70's, where would that have left you? Would you have been spouting these myths along with everyone else?

Looking forward, imagine a time when strength training fanatics like yourself look back and laugh at the times when people were silly enough to believe that leg extensions are bad, that machines cause injuries, and that you should never allow the back to round in good mornings or stiff legged deadlifts! What's that? You mean you *have* accepted those trends as truths? Then I encourage you to keep an open mind when reading the rest of this article!

Trends in Strength Training

I'm going to work with two examples here: the squat and the leg extension. Firstly, let's look at the squat. In 1961 a researcher by the name of Karl Klein published the following statement (6):

"The evidence accumulated in the various phases of this study strongly indicated that the deep squat exercise, especially as done in weight training... should be discouraged from the standpoint of its debilitating effect on the ligamental structures of the knee."

Klein then went on to share his views in two sports training journals, *Coach and Athlete* and *Texas Coach* (16). Do you think this negative view on squatting had an impact? Sure did! It had an impact on scientists, therapists, doctors, coaches, and trainers! Phillip Rasch, in his 1966 book, tells of that impact:

"Full squats and full deep-knee bends have been condemned by the National Federation of State High School Athletic Associations and the Committee on the Medical Aspects of Sports of the American Medical Association as potentially dangerous to the internal and supporting structures of the knee joint." (16)

It appeared to take at least ten years before any research was presented to refute Klein's work (9). You could say that some of the mud thrown by Klein still sticks in some quarters. In retrospect, many recognize that Klein conducted studies to conform to his prejudice. His studies were flawed in other words. Fortunately, not all people in that decade were ready to accept the influence of Klein. Rasch himself went on to say:

"During the forty-odd years that he has been interested in weight training, this writer has never known a man with damaged knees which were attributed to doing full squats or deep-knee bends."

Despite this admission, Rasch felt some need to conform as he explained:

"Until the question has been clarified, it seems safer to avoid full squats and deep knee bends. A simple way of gauging the degree of knee flexion is to squat until you are sitting on a bench and then rise again." (15)

Now Rasch may have felt some litigation concerns (more likely in today's climate) or more likely a need to conform to his peers (still a trend in academia). Despite this, full squatting did continue throughout gyms in America, influenced by proponents, writers and publishers through the earlier stages of that millennium, men such as Heinrich "Henry" Steinborn, Joseph Hise, Alan Calvert, Mark H. Berry, Perry Rader and Bob Hoffman. (15, 19)

The question is, how would *you* have handled this information? Would you have had the balls to make up your own mind? Well, here's your chance to find out! The leg extension received similar bad press in the 1990's to what the squat did in the 1960's. I'm not suggesting that the researcher that highlighted the limitations or downsides of the leg extension is fundamentally flawed, as Klein's earlier works may have been, but I do believe the research conclusions have been taken out of context and that there's been an overreaction to the "evidence."

Let me give you a real-life example. When I was rehabilitating a knee in the early 1980's from anterior cruciate reconstructive surgery (from a sports-related injury), the dominant mode of *rehab* was the leg extension. There was no way that a therapist was going to recommend the squat! When I had that surgery repeated in the early 1990's, the tables had turned. No way was the therapist going to recommend the leg extension!

We'll look closer at the leg extension issue later in this article and you can make up your own mind.

Trends in Nutrition

Prior to about 1990 it was extremely rare to see any mainstream nutritionist or scientist recommend anything above the US Recommended Dietary Allowance (RDA) of 0.7 gms of protein per kilogram of bodyweight.

The mainstream consensus of the 1980's is reflected in nutritional text that taught that those over 19 years of age required 0.8 gms of protein per kg of bodyweight. (21) It went on further to say that "the minimum necessary intake of protein is much less than the RDA...." According to the text, the RDA was actually adjusted upward to take into account the variability in the biological quality of protein!

This author did recognize the existence of theories supporting higher intake of protein but aimed to debunk them. Fortunately, there were scientists — even during the 1980's — that were reaching and teaching a different opinion to this mainstream conservative approach. They suggested 1.8 to 2.0 grams of protein per kilogram of bodyweight per day. (7) But it wouldn't be likely that the average man on the street would be exposed to this "radical" approach in that decade.

So what were the American strength and conditioning fraternity being taught in the late 1980s? According to a 1988 NSCA report:

"RDAs for protein are calculated at two standard deviations beyond the average requirement. This extrapolation then includes virtually all the population regardless of variance in physical activity behaviors... To date there is insufficient evidence to suggest that the well-conditioned strength or endurance athlete needs to alter what is now considered a healthy diet for the American population."

It gets better:

"In the strength and conditioning community, the conventional wisdom that athletes need additional protein beyond that provided by normal dietary practices is due in part to simple myth, to poorly designed studies given undue credit." (18)

The above author did recognize support for higher protein intake but appeared to place a foot on either side of the fence. Protein supplements experienced no support at all in the mainstream prior to about 1990. The following again reflects mainstream, peer reviewed consensus for the early 1980's:

"Protein supplements are not necessary for individuals undertaking strenuous exercise programs. Wise selection of quality protein foods will provide adequate amounts through balanced diets." (21)

The following holds no surprises as to the attitude of mainstream nutritionists around the start of the 90s:

"Protein powders and amino acid supplements are unnecessary providing the diet is satisfactory...the saintly status of protein is dying as athletes are realizing that the steak before a strenuous event does not assist with performance...it is pointless to take extra protein...there is no need to supplement the diet with extra proteins." (5)

And what were the physicians being taught at this time?

"...although these studies (by Lemon and others) raise intriguing questions, researchers seem to agree that most people — including athletes — are able to obtain all the protein they need through diet, without resorting to the use of supplements." (8)

Like the use of the word *resorting*? It gives the perception that the protein supplement user is a desperado taking some kind of addictive substance or risking his health!

And more of the same:

"It does not appear that protein supplements are needed to supply this 'extra' protein since athletes in general, consume adequate calories and protein." (12)

And of course there was the use of fear to discourage heretical behavior like breaking out of mainstream values, the old "how long can I make the list of possibilities that rarely if ever have happened" list! Here's an example:

"Chronic protein overloading can produce undesirable side effects... can worsen dehydration and increase the athletes risk of developing heat-related injuries... contribute to changes in renal function, total renal blood flow and glomerular filtration rate... detrimental to kidney structure and function, and increase the athlete's risk of developing renal diseases...increase the osmotic load in the intestine and produce severe gastrointestinal disturbances..." (20)

The sky is falling! The sky is falling! Fortunately not everyone went down this grim path in relation to protein!

"There does not appear to be any harm in eating excess protein in the healthy individual." (17)

As the co-author of the above article was Michael Stone, you can see his practical experience as a lifter may have given him better insight than some other non-practitioner researchers.

But as an average "I go to the gym and lift weights to get big and strong" type of person, there was some sense in the trash around this era. One *Muscle and Fitness* writer asked the question in the title of an article, "How much protein do you really need?", and the subtitle was a sight for sore eyes!

"Scientists argue, but bodybuilders know better!" (1)

No wonder, he had protein-whiz researcher Peter Lemon on his advisory team!

Trends in Drugs

In his classic 1978 book titled *Anabolic Steroids and Sport*, James E. Wright reviewed the conclusions of early research on the effect of anabolic steroids on various physiological parameters: (22)

1968: Weiss and Mueller — No statistically significant changes in grip strength or bodyweight.

1970: Munson — The steroid group did gain significantly more bodyweight and reduced skin fold.

1971: Casner, et al — Only statistical significant change observed was in bodyweight.

1972: Fahey and Brown — No significant differences between their improvements.

1985: Fowler et al — No significant changes in bodyweight, muscle size or skin fold thickness.

From these early studies came the consensus opinion that steroids just didn't work. Bill Phillips sums this up well in his early book on steroids with the following statement: (13)

"Most athletes lost all faith in the medical community's credibility years ago when they persisted that anabolic steroids were not effective for enhancing physical performance in spite of the fact that athletes were proving them wrong everyday."

Even when the researchers concluded that steroids may have a physiological impact, they seem determined to negate the performance benefits!

"Previous studies, as cited in this paper, have found no increased bodyweight due to anabolic steroid therapy in young men... results of this study do demonstrate that an increase in bodyweight was found in normal young men after anabolic steroid therapy. However, of much interest to the physician and to the athlete is the possibility that these weight gains in normal young men are fluid retention and, therefore, represent no advantage to the athlete; indeed, they may represent a hindrance." (2)

So there you have it; during the decades of the 60's, 70's, and 80's you could have been lead to believe that:

- Deep squats should never be done because they're bad for the knee ligaments.
- You don't need any more protein than Billy Bob the couch potato, and you definitely don't need to use (should I say "resort") to the use of supplemental protein.
- Anabolic steroids don't lead to weight gain, muscle size increases, increased strength, lower body fat, or performance increases in sports.

Sure, you can be wise in hindsight, but what about some of the "trends" or dominant beliefs you've been confronted with during the last decade, and that may continue to receive support for another decade or so? Are you going to be able to sift through this information and reach your own conclusions? Or are you going to go with the flock? I hope you can use some objective, plain-old common sense combined with your own intuition. (And yes, it's okay to respect your intuition!)

Here are some recent trends that seem to be attracting a flock mentality:

The "Evil" Leg Extension

Leg extensions were a bodybuilding favorite, a so-called "finisher" exercise, an isolated exercise for the quads where you could really see the impressive striations of the uni and bi-pennate (fan shape) muscles of the vastus medialis and rectus femoris.

Up until solid biomechanical analysis of the relative joint forces involved in the leg extension and squat, it seemed most lifters were happy to do both. However, once the information contained in articles such as the excellent review of the squat by Chandler (3) and the NSCA Position Paper on the Squat (11), there seemed to be a knee-jerk reaction to the leg extension.

Yes, it was revealed that per unit area, relative loads under the knee were greater in the leg extension. Yes, there may be more shearing forces, more anterior tibia translation and so on. But this is relative to the squat, *not* relative to good or bad! Like any exercise, there are people with conditions where it may not be advisable to perform leg extensions. But there are also people with conditions where it may not be advisable to perform squats!

The overreaction in the early 90's failed to observe more recent conclusions regarding the relative joint forces in the squat (a closed kinetic chain exercise or CKC) and the leg extension (an open kinetic chain exercise or OKC). Neitzel and Davies (10), in an excellent article regarding the benefits and controversy of the parallel squat in strength training and rehabilitation, concluded:

"When exercising from 30 degrees to 90 degrees ROM, OKC may be a better choice than CKC exercises because there may be less PFJ [patella-femoral joint] stress and more VMO electromyographic activity."

The point I'm making is that the leg extension has something to offer, and should be considered as an option and not ruled out of contention! As the statement above shows, it in fact may bring to the table a unique opportunity and benefit not offered by any other exercise!

Machines and Injuries

There's been a recent surge in interest about weight training injuries, which is good and bad — good that attention is going into this area, bad that there are injuries in the first place!

There are many factors that contribute to injuries, and in the case of chronic injuries (injuries that form over a long period of time), the contributing factors can be less clear, and in some cases, overtly present only in the past. So it's understandable that some mis-conclusions may be drawn as to the cause of the injuries.

I don't know where it came from but it became evident during the last half of the 1990's that there was a growing and propagated belief that "machines cause injuries, so don't use them!" It appears the Smith machine and leg extension copped the worst flogging, to the extent that some facilities reacted by removing these devices.

I don't mean to state the obvious, but how can a lump of steel with a touch of vinyl cause an injury? From a pure, literal interpretation, from a common denominator, or cause-effect analysis, the machine can't do this! Perhaps a person using the machine can create an injury, but it doesn't mean it has anything to do with the machine. Don't blame the machine for human error.

From my perspective, conclusions such as "the machine caused the injury" may be overlooking the contribution of many other factors, including lack of technique, lack of

preparation, lack of progression, existence of flexibility and or muscle imbalances, excessive soft-tissue shortening, and so on.

Machines have their place. Give it some clear objective analysis before you reach the conclusion that the machine is bad and has to go. Don't throw the baby out with the bath water!

The Good Morning and Stiff-Legged Deadlift

In a recent article I recommended doing a good morning or stiff-legged deadlift with a rounded back. I didn't expect it, but it seems to have had a similar impact that my full-range bench suggestion had at that LA seminar!

If you review any literature on strength training prior to about 1990, there was never or rarely an objection to performing a rounded back good morning or stiff-legged deadlift. But during the last decade there seems to have grown this belief that the rounded back technique is bad and shouldn't be done.

I'm stunned by the acceptance throughout this industry of this perception. It became really obvious in seminars when I'd ask someone to do a good morning or stiff-legged deadlift. The only one they demonstrate is the flat back version, and it appears they have never seen or contemplated that a rounded back version could be associated with the exercise name!

It may come as a bit of a surprise, but up until the early 1990's, if I'd asked a seminar participant to show me the good morning or stiff-legged deadlift, they would've done the rounded back version! So what's changed?

My guess is this. The flat back, chest up version of the stiff-legged deadlift was popularized in the US by various former European weightlifting coaches. The style they taught became known as the Romanian deadlift. It has a unique training effect of better stretch and isolation of the hamstrings and it became very popular.

Now about the same time there were writings describing the rounded back stiff-legged deadlift as "wrong" and "dangerous." I'm not sure if these writings coincided with the rising popularity of the Romanian deadlift by accident or fate, or because there was an urge to justify the new, popular version by finding fault in the formerly more popular version.

Two recent NSCA articles reinforce the attitude of discouragement towards rounded back stiff-legged deadlifts :

"The back is flat and should not be allowed to become rounded — especially in the lower depths of the movement." (4)

Now these authors did generously concede that "rounding of the back and shoulder is acceptable when using very light weight to target intervertebral muscles." The following authors didn't make that concession:

"Round back lifting, known as kyphotic lifting posture during this or other lifts, should be avoided for prevention of injury." (14)

It's this type of "don't ever do it" attitude, I suggest, is *more* likely to lead to injury! I remember when the "only curl up 30 degrees in the sit-up to isolate the abs" movement gained momentum. Most people lost the ability to flex through full range. I suggest this wasn't good for real life application! So-called attempts to prevent injury in the gym may deny the opportunity to strengthen for real-life movements.

Is rounding the back during trunk flexion a real-life movement? I believe so. Further to that, have you ever seen an athlete, say, playing basketball, pick the ball up off the ground using the flat-back technique? Or a parent picking up their child with a flat back? Or a senior citizen with arthritic knees picking something up off the ground with minimal knee flexion (which is what they tend to do) but with a flat back?

There, I've covered sport, daily life, and specific age groups. If you don't use it, you lose it. This is a concern I have with adopting this "never do it" philosophy towards any exercise!

Conclusion

I've taken a trip down memory lane, a brief historical flight back to a time when just about everyone believed that squats were bad, protein was naughty, and steroids didn't work. Hard to imagine now, isn't it?

Well, before you blindly accept every dominant trend that you come upon, think about the day when you may look back and laugh at the times when people were scared to do leg extensions, believed machines were inherently evil, and lost the ability to trunk flex with a rounded back.

What I'm suggesting is to run at least a short analysis of any new paradigm you encounter. Ask yourself questions like: Does it make sense? Could it be possible that no one should ever do it? Have I ever been injured by it? Have I ever seen anyone else injured by it? What does my intuition tell me? If you're still not sure, ask yourself, did it hurt when I did it?

Then, as the wise willow tree said to Pocahontas (you can see how I spend my spare nights now, reading children's books!), "You must follow your heart." To which I add, follow your heart and not necessarily the flock, and have the balls to make up your own mind! But of course I won't be adlibbing this last line when I read my daughter her bedtime book.

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